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Valvular Heart Disease

COST BENEFIT ANALYSIS OF TRANSCATHETER AORTIC VALVE IMPLANTATION COMPARED TO CONVENTIONAL MEDICAL TREATMENT INCLUDING VALVULOPLASTIES IN PATIENTS WITH SEVERE AORTIC STENOSIS

Poster Contributions
Poster Sessions, Expo North
Sunday, March 10, 2013, 9:45 a.m.-10:30 a.m.

Session Title: TAVR III: Meta-Analyses, Costs and International and National Trends in TAVR
Abstract Category: 32. Valvular Heart Disease: Therapy
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Background: To evaluate the cost effectiveness of Transcatheter Aortic Valve Implantation (TAVI) compared with conventional medical treatment in patients with severe aortic stenosis (AS) who are ineligible for surgical Aortic Valve Replacement (AVR). In addition, we also assess Quality of Life (QOL) and mortality rate between the two groups.

Methods: The research was gathered between Galway University Hospital (GUH) and St James Hospital. In GUH, retrospective chart review were conducted over 2 year period in patients who had severe AS, high risk for AVR treated with conventional medical treatment (Group 1 -42 patients). In St James hospital we enrolled patients who had TAVI over 2 year period (Group 2 -44 patients). For each patient, we identified the number of admission, Inpatients and outpatients days, number of Echo, valvuloplasty and TAVI. The Unit cost was estimated by Casemix. We had also ask to rate their health status and filled out EQ5DQOL questionnaire.

Results: We enrolled 86 patients with severe AS of whom 42 patients were treated with conventional medical treatment in GUH and 44 patients were treated with TAVI in St James hospital over 2 year period (2009 -2010). Mean age was 84 years old. As compared with patients receiving conventional treatment, patients in the TAVI group had an overall higher total cost, TAVI [30140 ± 6711] vs conventional [15265 ± 15252]), (P=<0.001). However with lesser readmission rates TAVI [0.36 ±1.01] vs conventional treatment [2.29±1.5], (P=<0.001) and lower mortality rate (TAVI 9.3% VS conventional treatment 30.9%, P=0.010 and 95% CI: 0.0519, 0.3811). In QOL study, the mean for those who had TAVI was 68.6% (SD+/-16.2) whilst the mean for conventional treatment was 56.8% (SD+/-19.0),P = 0.015 (95% CI:-21.2,-2.38). Those who had TAVI reported 11.8%, on average, higher health percentage compared with those who had conventional treatment.

Conclusion: In this study, the total cost of treatment with TAVI was significantly higher compared with conventional medical treatment for patient with AS high risk for AVR. However patient treated with TAVI has lower readmission rate, significantly lower mortality rate and better quality of life.